

A NEW SPECIES OF *MACRUROHELEA* INGRAM AND MACFIE, AND NEW RECORDS OF BITING MIDGES OF THE TRIBES *CULICOIDINI* AND *CERATOPOGONINI* (DIPTERA: *CERATOPOGONIDAE*) FROM TIERRA DEL FUEGO AND THE MAGALLANES

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Abstract.—The first records of biting and predaceous midges of the tribes *Culicoidini* and *Ceratopogonini* are provided from Tierra del Fuego and the Magallanes. A new species of predaceous midge, *Macrurohelea yamana*, is described and illustrated from Tierra del Fuego, Argentina. *Paradasyhelea brevipalpis* (Ingram and Macfie), *Austrohelea shannoni* (I. and M.), *Stilobezzia (Acanthohelea) varia* I. and M., and *S. (A.) succinea* I. and M., are recorded for the first time from Tierra del Fuego and the Magallanes.

Resumen.—Se proveen nuevos registros de especies de ceratopogónidos de las tribus *Culicoidini* y *Ceratopogonini* para el sector argentino de la isla de Tierra del Fuego, y para islas de la zona de Magallanes en Chile. Se describe e ilustra una especie nueva, *Macrurohelea yamana*, de Tierra del Fuego. Se registran por primera vez para el área de referencia a *Paradasyhelea brevipalpis* (Ingram and Macfie), *Austrohelea shannoni* (Ingram and Macfie), *Stilobezzia (Acanthohelea) varia* I. and M., y *S. (A.) succinea* I. and M.

Key Words: Diptera, Ceratopogonidae, Biting midges, new species, Tierra del Fuego, Magallanes

Although 65 species of *Ceratopogonidae* have been described and/or recorded from Patagonia, only four species are known to occur south of 52°S: *Dasyhelea reynoldsi* Ingram and Macfie (1931), *Forcipomyia wygodzinskyi* Cavalieri (1961a), *F. delpon-tei* Cavalieri (1961b), and *F. pirooskyi* Cavalieri (1961b), all from the large island of Tierra del Fuego. These four species belong to the subfamilies *Dasyheleinae* (*Dasyhelea*) and *Forcipomyiinae* (*Forcipomyia*) (Borkent and Wirth 1997), but no members of the subfamily *Ceratopogoninae* have been previously recorded from this region.

Recently, GRS collected specimens of

Ceratopogoninae in the tribes *Culicoidini* and *Ceratopogonini* from Tierra del Fuego. Additional Malaise trap collections by Dolly Lanfranco during the early 1980's from the Chilean Magallanes of Deceit and Wollaston Islands, that were kindly donated to us by the late W. W. Wirth, prompted detailed examination of all available material from this region. This article presents results of this study, in which we describe and illustrate a new species of *Macrurohelea* Ingram and Macfie, and provide the first records of *Paradasyhelea brevipalpis* (Ingram and Macfie), *Austrohelea shannoni* (I. and M.), *Stilobezzia (Acanthohelea) varia* I.

and M., and *S. (A.) succinea* I. and M., from Tierra del Fuego and the Magallanes. Major collection sites are indicated on the map presented in Fig. 1.

The types of the new species are slide-mounted in Canada balsam, and deposited in the collection of the Museo de La Plata, Argentina. For general ceratopogonid terminology see Downes and Wirth (1981); for terminology dealing with the Ceratopogonini, see Wirth and Grogan (1988).

Tribe Culicoidini

Paradasyhelea brevipalpis (Ingram and Macfie)

Dasyhelea brevipalpis Ingram and Macfie 1931:178 (male; Argentina).

Paradasyhelea brevipalpis: Macfie 1940:17 (combination; generic status); Wirth, 1974:18 (in catalog); Spinelli 1987:667 (female; Argentina, Neuquén and Río Negro provinces); Borkent and Wirth 1997:86 (in catalog).

Distribution.—Argentina, in subantarctic *Nothofagus* forests, from 40°S south to Tierra del Fuego.

New records.—Argentina, Tierra del Fuego, Lake Escondido (50 km NE of Ushuaia), 2-III-1993, G. Spinelli, 1 ♀; Ushuaia, Lapataia Bay, 9/10-I-1995, G. Spinelli, 6 ♀, CDC light trap.

Tribe Ceratopogonini

Austrohelea shannoni (Wirth and Blanton)

Monohelea (Isthmohelea) shannoni Wirth and Blanton 1972:175 (female; Argentina, Bariloche); Wirth 1974:40 (in catalog).

Austrohelea shannoni: Wirth and Grogan 1988:23 (combination; fig. male genitalia); Borkent and Wirth 1997:91 (in catalog).

Distribution.—Argentina, in subantarctic *Nothofagus* forests, from 40°S south to Tierra del Fuego; Chile, Wollaston Island in the Magallanes.

New records.—Argentina, Tierra del Fuego, 10 km W Ushuaia (peat bog) on the

route to Lapataia Bay, 1-III-1993, G. Spinelli, 2 ♀; Ushuaia, 1 km N river Tristen, 2-III-1993, G. Spinelli, 1 ♀; 55 km E of Ushuaia, 3-III-1993, G. Spinelli, 1 ♂. Chile, Magallanes, Wollaston Island, Scourfield Bay, 17/25-II-1980, D. Lanfranco, 3 ♂, Malaise trap.

Stilobezzia (Acanthohelea) succinea Ingram and Macfie

Stilobezzia succinea Ingram and Macfie 1931:200 (female, male; Argentina, Bariloche).

Stilobezzia (Neostilobezzia) succinea: Das Gupta and Wirth 1968:142 (in list); Wirth 1974:43 (in catalog).

Stilobezzia (Acanthohelea) succinea: Wirth and Grogan 1988:88; Borkent and Wirth 1997:109 (in catalog).

Distribution.—Argentina, in subantarctic *Nothofagus* forests, from 40°S south to Tierra del Fuego; Chile, Deceit Island in the Magallanes.

New records.—Argentina, Tierra del Fuego, Paso Garibaldi (45 km NE of Ushuaia), 2-III-1993, G. Spinelli, 1 ♂; Ushuaia, Lapataia Bay, 24/28-II-1997, P. Posadas, 1 ♀, Malaise trap. Chile, Magallanes, Wollaston Island, Scourfield Bay, 17/25-II-1980, D. Lanfranco, 8 ♀, Malaise trap; Deceit Island, 19/27-XI-1982, D. Lanfranco, 9 ♀, 13 ♂, Malaise trap.

Stilobezzia (Acanthohelea) varia Ingram and Macfie

Stilobezzia varia Ingram and Macfie, 1931:191 (female, male; Argentina, Chile).

Stilobezzia (Neostilobezzia) varia: Das Gupta and Wirth 1968:139 (in list); Wirth 1974:44 (in catalog).

Stilobezzia (Acanthohelea) varia: Wirth and Grogan 1988:88; Borkent and Wirth 1997:109 (in catalog).

Distribution.—Argentina, in subantarctic *Nothofagus* forests, from 40°S south to Tierra del Fuego; Chile, environs of Puerto Montt and Chiloe Islands, and Wollaston Island in the Magallanes.

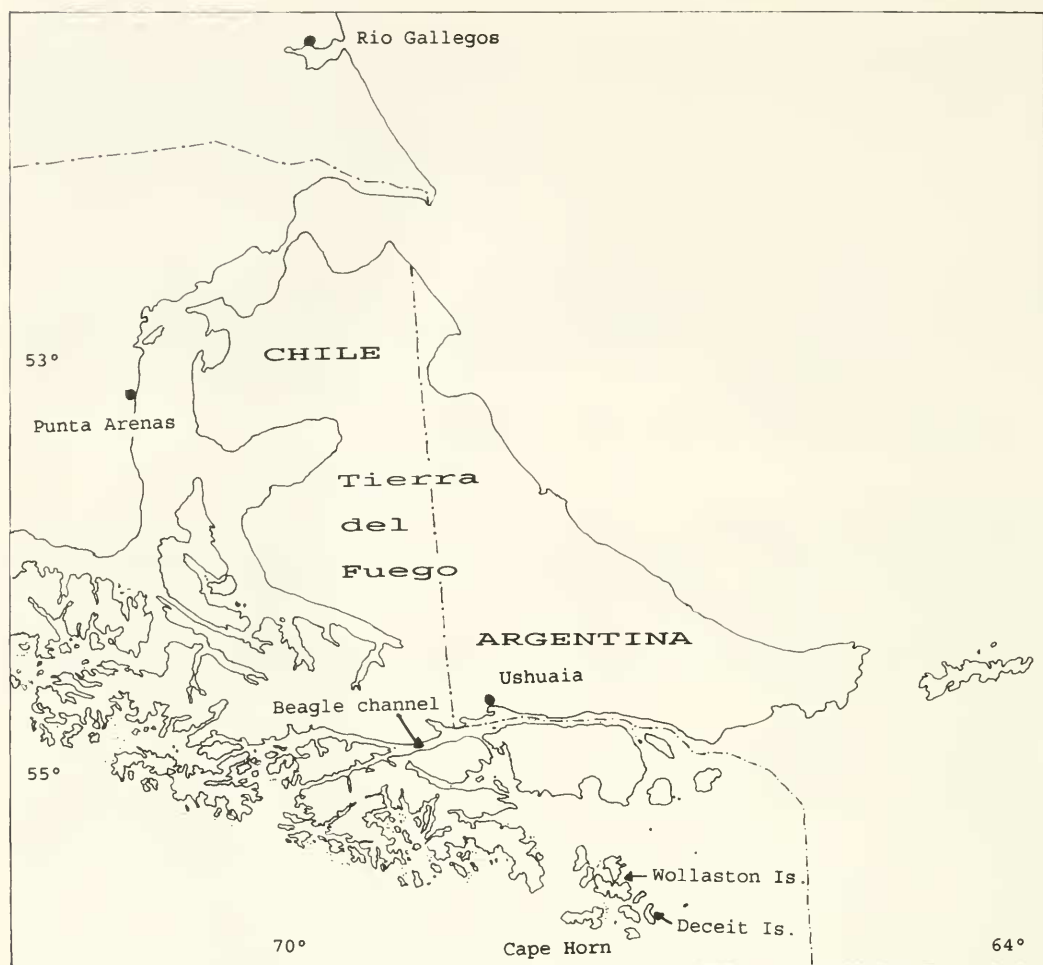


Fig. 1. Map of extreme southern Argentina and Chile, with collection localities indicated on Tierra del Fuego and the Magallanes.

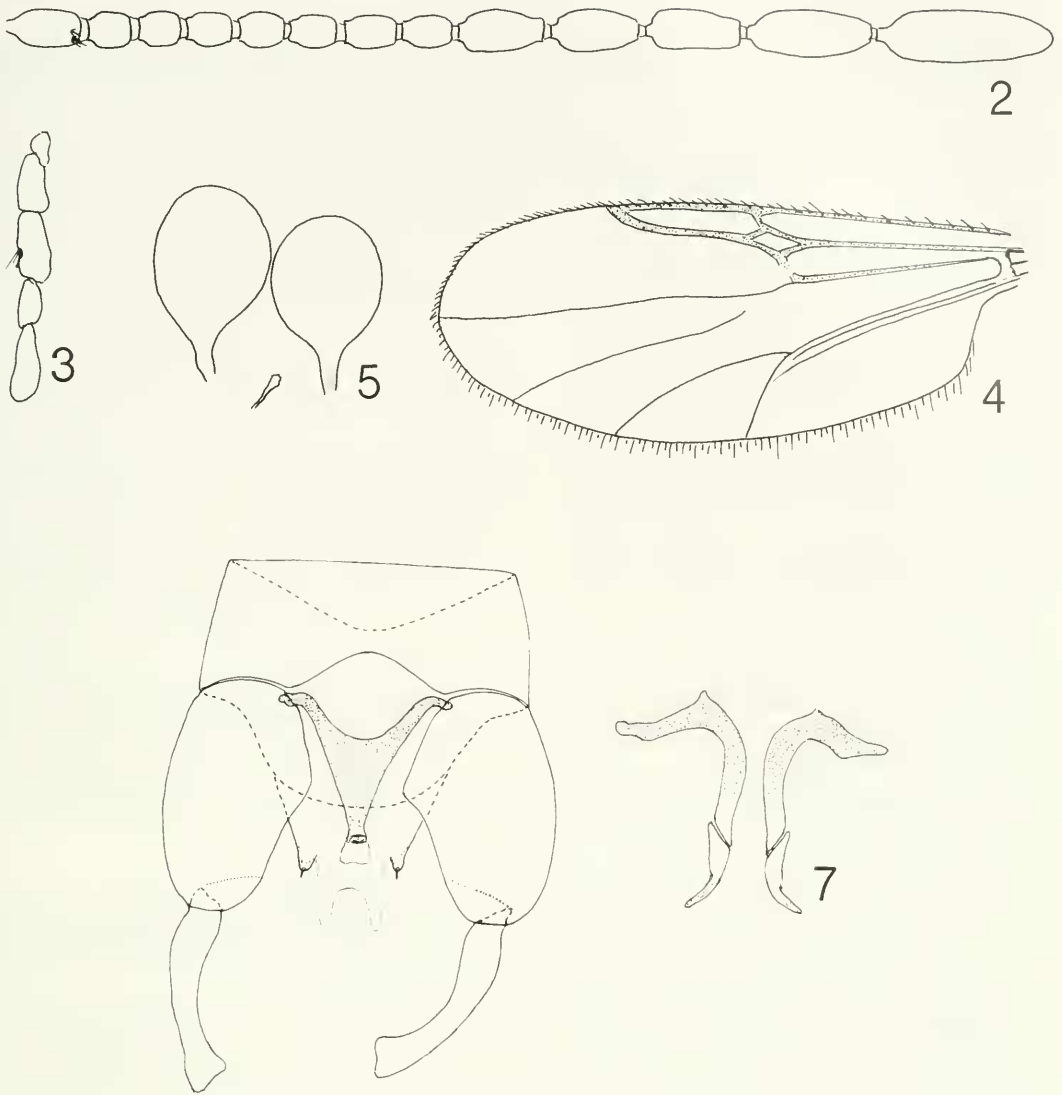
New records.—Argentina, Tierra del Fuego, 12 km W Ushuaia (pond) on the route to Lapataia, 1-III-1993, G. Spinelli, 1 ♀. Chile, Magallanes, Wollaston Island, Scourfield Bay, 17/25-II-1980, D. Lanfranco, 3 ♀, 2 ♂, Malaise trap.

***Macrurohelea yamana* Spinelli and
Grogan, new species**
(Figs. 2–7)

Diagnosis.—*Female*: only species in the genus of medium size (wing length 1.50 mm); wing without intercalary vein in cell R5, 2nd radial cell 3× longer than 1st; distal 5 flagellomeres distinctly broader and

longer than proximal 8 flagellomeres; and two ovoid spermathecae with long necks. *Male*: only species in the genus having a gonostylus with spatulate tip; cerci finger-like; and the distal portions of the parameres broken at midlength.

Female.—*Head*: Dark brown. Eyes pubescent, separated by distance equal to diameter of 3 ommatidia. Flagellum (Fig. 2) with lengths of flagellomeres (in μm) 52-28-28-32-32-32-32-56-56-60-76-108; flagellomeres 9–13 distinctly longer, broader than 1–8; flagellomere 1 with apical sensilla coeloconica; antennal ratio 1.33. Palpus (Fig. 3) with lengths of segments (in



Figs. 2-7. *Macrurohelea yamana*. 2, Female flagellum. 3, Female palpus. 4, Female wing. 5, Spermathecae. 6, Male genitalia, parameres removed. 7, Parameres.

μm) 20-40-44-28-48; segment 3 with very small sensory pit bearing a few capitate sensilla. Mandible with 11 teeth. **Thorax:** Uniformly dark brown; 4 prealar setae, 1 postalar seta; scutellum with 3 large setae. Legs dark brown; hind tibial comb with 6 spines; palisade setae on tarsomere 1 of fore and hind legs; hind tarsal ratio 2.35 (2.30-2.40, $n = 2$); tarsomeres 4 cordiform; claws small, equal sized, without basal inner teeth. Wing (Fig. 4) with membrane slightly

infuscated, anterior veins dark brown, posterior veins light brown; 2nd radial cell $3\times$ longer than 1st; cell R5 without intercalary vein; vein M2 interrupted at extreme base; wing length 1.50 (1.46-1.54, $n = 2$) mm, breadth 0.65 (0.63-0.67, $n = 2$) mm; costal ratio 0.71 (0.70-0.72, $n = 2$). Halter pale brown. **Abdomen:** Brown. Segments 9,10 elongated, bent forward ventrally as is typical for the genus. Spermathecae (Fig. 5) slightly unequal, ovoid with moderately

long necks, measuring 0.053 by 0.038 mm, and 0.045 by 0.038 mm, necks 0.015 mm long.

Holotype male.—Similar to female with usual sexual differences, and following other differences: Wing length 1.48 mm, breadth 0.55 mm; costal ratio 0.66; 2nd radial cell twice as long as 1st. Genitalia as in Figs. 6–7. Sternite 9 moderately long with narrow, shallow caudomedian excavation; tergite 9 moderately short, rounded, apicolateral processes short, nipple-like, each with minute seta; cercus finger-like, pilose. Gonocoxite stout, 1.5× longer than broad with blunt mesobasal protuberance; gonostylus as long as gonocoxite, slightly curved, tip spatulate. Aedeagus heavily sclerotized, narrowly triangular, slightly longer than broad; basal arm short, recurved nearly 90°; basal arch about ¼ of total length; distal portion tapering to moderately broad, blunt, lightly sclerotized tip. Parameres (Fig. 7) separate, heavily sclerotized; basal apodeme elongate laterally; distal portion more lightly sclerotized, broken at midlength, tip recurving slightly ventrolaterally.

Distribution.—Known only from the type-locality on Tierra del Fuego, Argentina.

Type material.—Holotype ♂, Argentina, Tierra del Fuego, Ushuaia, Lapataia bay 24/28-II-1997, P. Posadas, malaise trap; allotype ♀, one paratype ♀, Argentina, Tierra del Fuego, Ushuaia, Los Castores stream, Lapataia Bay, 1-III-1993, G. Spinelli, sweep net.

Etymology.—The specific epithet, a noun in apposition, refers to the Yamana Indians, early inhabitants of Lapataia Bay, the type-locality on Tierra del Fuego.

Discussion.—In the most recent key to Neotropical species in this genus by Spinelli and Grogan (1990), the female of this new species keys to couplet 10, near *M. setosa* Wirth (1965). However, the females of *M. setosa* differ from that of *M. yamana* in being larger (wing length 2.1 mm), the costal ratio is greater (0.81), the legs are cov-

ered in bristly setae, the antennal ratio is smaller (1.07), and the spermathecae have short necks.

The male of *M. yamana* keys to couplet 16 near *M. gentilii* Spinelli and Grogan (1984) and *M. irwini* Grogan and Wirth (1980) in the key by Spinelli and Grogan (1990). However, the male of *M. gentilii* differ from the male of *M. yamana* by the gonostylus bent abruptly subapically at more than 90°, the whitish hyaline wing membrane with pale veins, and the distal portions of the parameres not broken at midlength. Males of *M. irwini* differ from those of *M. yamana* in having a gonostylus only half the length of the gonocoxite with a pointed tip, the parameres fused basally and the distal portions are broken at midlength, the aedeagus has a bifid tip, and the greater costal ratio (0.62).

This is the fifteenth species of this genus of Gondawna distribution, 12 species of which are indigenous to southern Argentina and Chile, whereas 3 species inhabit Australia (Lee 1963; Grogan and Wirth 1985).

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